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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET N.E.
ATLANTA, GEORGIA 30365

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FEB 1 1994

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

James C. Brown, Manager
Environmental Affairs Department
Olin Chemicals
Post Office Box 248
Charleston, Tennessee 37310

SUBJ: EPA Comments on the Feasibility Study Report and Revised Risk Assessment - McIntosh Plant Site Olin Corporation McIntosh, Alabama

Dear Mr. Brown:

In accordance with Section VIII of the Administrative Order by Consent ("AOC") between Olin Corporation ("Olin") and the U.S. Environmental Protection Agency, Region IV ("EPA"), EPA has reviewed Olin's October 21, 1993 resubmission of the Feasibility Study Report McIntosh Plant Site Olin Corporation McIntosh, Alabama ("FS"). As we discussed on January 31, 1994, the FS has been determined to be acceptable for the purpose of evaluating remedial alternatives for Operable Unit One and is approved. However, further evaluation of remedial options may be required for Operable Unit Two.

Additionally, as we discussed, Olin's submission of the modifications to risk assessment portion of the July 30, 1993 Remedial Investigation Report for the Olin Site has been reviewed. EPA has determined that further modifications are required. The enclosure to this letter contains the required modifications. The modifications are as we discussed on the 31st. Please submit five copies of the modified pages within ten (10) days of your receipt of this letter. If you have any questions, please feel free to call me at (404) 347-2643.

Sincerely,

Kenneth A. Lucas
Remedial Project Manager
South Superfund Remedial Branch

Enclosure

cc: Justin Martindale, ADEM w/enclosure

ENCLOSURE

1. The HEAST reference cited on pages 6-9 and 6-39 was outdated during the preparation of this revision; the current HEAST is dated March 1993.

2. The footnotes on pages 6-16 and 6-22 must be removed from these sections of the document. Though this document has been prepared by Olin, when EPA accepts the baseline risk assessment it takes ownership of the document; it must make it available to the public as an EPA accepted document. The comments in these footnotes are not appropriate in these sections of the report; they are appropriate to the uncertainties section.

3. Table 6-35 must be revised, one set of RGOS should be presented for each media. As currently presented, there are three sets of RGOs for groundwater exposures. The equations for dermal, ingestion and inhalation exposures should be combined for one set of groundwater RGOS. Please use the enclosed, "Development of Preliminary Remediation Goals, Remedial Goal Options, and Remediation Levels, (Revised 1/28/94)", for reference.

Development of Preliminary Remediation Goals, Remedial Goal Options, and Remediation Levels

GIETechS Article (Revised 1/31/94)
Julie W. Keller, Office of Health Assessment
Waste Management Division, Region IV EPA

The Office of Health Assessment (OHA) issued a supplemental guidance to "Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part A)" titled "Supplemental Region IV Risk Assessment Guidance" in March 1991. Additional guidance has been added to this supplement from time to time. The evolution of risk assessment is continually ongoing and the OHA sees the need for a more extensive updated guidance. It is anticipated that this new guidance will be developed in the next few months. One clarification to appear in the new risk assessment guidance is the development of Preliminary Remediation Goals (PRGs), Remedial Goal Options (RGOs) and Remediation Levels (RLs).

Preliminary Remediation Goals (PRGs) are established at scoping for toxic substances known to be present at the site in order to provide a basis for the feasibility study consideration of all appropriate remedial alternatives that may achieve the target levels. PRGs serve as the basis of the development of the sampling and analysis plan to ensure that the proposed methods will achieve adequate quantitation limits. PRGs are based on ARARs or risk-based calculations to set concentration limits. The use of PRGs will limit the number of alternatives included in the feasibility study and streamline the process. Calculation of PRGs should be done in accordance with "Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual, Part B, Development of Risk-based Preliminary Remediation Goals." PRGs are intended as initial guidelines and do not establish that cleanup to these goals is warranted.

The baseline risk assessment should include a section which outlines the remedial goal options (RGOs) for the chemicals and media of concern. This section should include both ARARs and health based cleanup goals. This section should contain a table with media cleanup levels for each chemical that contributes to a pathway that exceeds a 10^{-4} risk (or what ever risk level is chosen as the remediation "trigger" by the risk manager) or a HI of 1 or greater or exceeds a state or federal chemical-specific ARAR for each scenario evaluated in the baseline risk assessment. Chemicals need not be included if their individual carcinogenic risk contribution to a pathway is less than 10^{-6} or their noncarcinogenic HQ is less than 0.1. The table should include the 10^{-4}, 10^{-5}, and 10^{-6} risk levels for each chemical, media and scenario (land use) and the HQ 0.1, 1 and 10 levels as well as any chemical-specific ARAR values (state and federal). The values should be developed by combining the exposure levels to each chemical by a receptor from all appropriate routes of exposure (i.e. inhalation, ingestion and dermal) within a pathway and rearranging the site-specific average-dose equations used in the baseline risk assessment to solve for

the concentration term. The resulting table should present one set of RGOs for each media and each land use (e.g., residential (child and adult) and industrial). The purpose is to provide the RPM with the maximum risk-related media level options on which to develop remediation aspects of the Feasibility Study and Proposed Plan. RAGS Part B is not appropriate for the development of RGOs since site specific exposure information is available at this stage in the risk assessment process.

Remediation Levels (RLs) are chosen by the risk manager for the chemicals of concern and are included in the Proposed Plan and the Record of Decision. These numbers derived from the RGOs are no longer goals and should be considered required levels for the remedial actions to achieve.